1.   (Previously presented)   An improved dynamic bandwidth allocation method in a reservation system comprising one or more users and at least one headend, wherein one or more of said users request respective allocations of bandwidth based on a state parameter of said requesting user, said headend dynamically allocating bandwidth to one or more of said users in response to said respective requests, said headend responding to each of said requesting users with said allocated bandwidth, said response being delayed for a period of time which is a function of a reservation latency δ of said reservation system, said improvement comprising the step of scaling said request by a factor of $1/\delta$.

2. and 3.   (Cancelled)

4.   (Previously presented)   Apparatus for use with a headend node which allocates time slots on a channel to users, comprising:

a)   a user node which

    i)   utilizes the channel, and

    ii)   holds a queue of messages;

b)   means at the user node for

    i)   ascertaining a number N of time slots required to handle the queue; and

    ii)   requesting the headend node to allocate to the user node a fraction of the N time

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slots.

5.   (Previously presented)   Apparatus according to claim 4, wherein the fraction equals 1/latency, wherein latency is an average delay time, measured in units of time slots, between (1) a request for an allocation and (ii) a grant of the request.

6.   (Previously presented)   In a network wherein (1) nodes request allocations of time slots on a channel from an allocator, (2) a delay D exists between issuance of a request and resulting allocation, and (3) delays D can induce repetition of an initial request by a node and consequent multiple allocations in response to the initial request, thereby causing allocation of excessive time slots in response to the initial request, a method of operating a node comprising:

   a) ascertaining number N of time slots required to clear
   a queue standing at the node;

   b) making a first request for an allocation of fewer
   than N time slots from the allocator; and

   c) making a second request for an allocation of fewer
   than N time slots from the allocator.

7.   (Previously presented)   Method according to claim 6, wherein the first and second requests ask for the same number of

time slots.

8. (Previously presented) Method according to claim 6, wherein the first and second requests ask for different numbers of time slots.

9. (Previously presented) Method according to claim 6, wherein the delay D is measured in units of time slots and the first request is for N/D time slots.

10. (Previously presented) The method of claim 1 wherein said request equals the size S of a queue of a user divided by δ, namely, S/δ.

11. (Currently amended) ~~The method of claim 1,~~

An improved dynamic bandwidth allocation method in a reservation system comprising one or more users and at least one headend, wherein one or more of said users request respective allocations of bandwidth based on a state parameter of said requesting user, said headend dynamically allocating bandwidth to one or more of said users in response to said respective requests, said headend responding to each of said requesting users with said allocated bandwidth, said response being delayed for a period of time which is a function of a reservation latency δ of said

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reservation system, said improvement comprising the step of scaling said request by a factor of 1/δ, wherein each user

    a)   determines two amounts, namely,

        i)   a fraction of a queue held by the user and

        ii) number of arrivals of messages at the user

        at the time of request, and

    b)   requests bandwidth equal to one of the amounts.

    12.   (Previously presented) Method of claim 11, wherein the user determines whether one amount is larger than the other, and requests bandwidth equal to the larger.

    13.   (Previously presented) Method of claim 11, wherein the determination of two amounts is done by a computer operated by the user.

    14.   (Previously presented) Method of claim 12, wherein the determination of whether one amount is larger is done by a computer operated by the user.